



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/604,302  | 07/09/2003  | Hans-Artur Bosser    | 21295-55            | 1301             |
| 29127   | 7590        | 10/18/2005           |                     | EXAMINER         |
| HOUSTON ELISEEVA<br>4 MILITIA DRIVE, SUITE 4<br>LEXINGTON, MA 02421 |             |                      |                     | GABOR, OTILIA    |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      |                     | 2878             |

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/604,302             | BOSSER, HANS-ARTUR  |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Otilia Gabor           | 2878                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 09 July 2003.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-17 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-17 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 19 August 2005 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Amendment***

1. The amendment filed 08/19/2005 has been entered.

***Drawings***

2. The drawings were received on 08/19/2005. These drawings are accepted.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Engelhardt (U. S. Patent 6,355,919) and further in view of Brody et al. (U. S. Patent 3,645,627).

Engelhardt discloses an apparatus and method for calibrating the optoelectronic sensor (5) contained in a microscope, which microscope is used to measure features on a substrate (1). The calibrating apparatus (12) comprises at least: a light source for illuminating the sensor (5) whereby the light source can emit different spectra and quantity of light onto the sensor in order to ascertain the sensor's characteristic response; a memory and evaluation unit for storing the different sensor responses and to automatically correct the sensor's response based on the calibration data obtained (see Col.2, line 61-Col.3, line 64). Engelhardt discloses that the microscope is used to

measure features on the surface of the sample (1) by acquiring images of the sample and that the calibration can be done before, during and/or after the scanning and image generation of the object, where during calibration the sensor is intermittently exposed to the scanning light as well. Engelhardt discloses a calibration apparatus and method for a generic microscope where the scanning light could be of any type, but he fails to specifically disclose it to be a UV microscope. However, since he does not limit the scanning light source and since his method can be applied with any light, it is obvious that the calibration method works with any type of microscope and thus it works with a UV microscope as well.

Regarding claims 1, 11, 12, 17 Engelhardt does not disclose in detail how the calibration is done, however, the claimed steps are conventional steps that are taken when a sensor is calibrated using an external light source. These conventional steps are disclosed in Brody et al. Brody et al discloses calibrating a sensor (13) response by illuminating the sensor (13) with a first light quantity from a reference light source (20) and measuring and storing the first sensor output; then varying the light quantity from the source (20) using a controller that controls the light quantity output from the reference light source (20); determining the sensor's response characteristics as a function of the light quantity, followed by the comparisons of the sensor response characteristics in order to determine the changes in the sensor response and the correction amount that the final measurement data needs to be corrected by (see Col.3, lines 39-75, claim 1). Engelhardt discloses that the microscope is used to acquire images with the sensor (5) and that the sensor characteristics are acquired at

wavelengths that are used in the measurement of the component (1). Engelhardt also discloses that many different types of measurements can be done using this apparatus, and the fact that an image size and image linearity calibration is done indicates that the object (1) is scanned in order to get an image of the width and spacing features of the object. Regarding claims 14, Engelhardt also discloses that the calibration can be done automatically.

Regarding claims 2, 3 Engelhardt discloses that the calibration means can comprise different reference structures depending on the component to be calibrated. These means can comprise any gratings, lines, steps, recesses, as well as any means that have known reflecting, absorbing or polarizing means. Thus, it is obvious that absorption or scattering filters are contemplated as part of the calibration means disclosed by Engelhardt.

Regarding claims 4, 5, 13 Brody et al. discloses that controlling the light quantity is done using an aperture (40) and an actuatable shutter interposed between the source and the sensor for passing or blocking the light from the source to the sensor (see claims 1, 4, 6 in Col.4).

#### ***Response to Arguments***

5. Applicant's arguments filed 08/19/2005 have been fully considered but they are not persuasive. The main argument presented by the Applicant is that neither Engelhardt nor Brody disclose calibrating the sensor, but that Engelhardt discloses calibrating for the brightness fluctuations of the light source, and that Brody discloses

calibrating the whole instrument and not the sensor. This argument, however is not persuasive because Engelhardt in Col.2, line 61-Col.3, line 64 clearly discloses calibrating all elements (which includes the sensor) of the system, and particularly discloses in Col.2, line 67-Col.3, line 2 the step of calibrating the detector, and Brody discloses calibrating the system which system is a photodetector, and thus, it does in fact disclose a method for calibrating the detector.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Otilia Gabor whose telephone number is 571-272-2435.

Art Unit: 2878

The examiner can normally be reached on Monday, Thursday-Friday between 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571-272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Otilia Gabor  
Primary Examiner  
Art Unit 2878

  
OTILIA GABOR  
PRIMARY EXAMINER



Application No.: 10/604,302  
Filing Date: July 9, 2003  
Group Art Unit: 2878

Replacement Sheet 2/4

accepted

OG

(0-12-05)

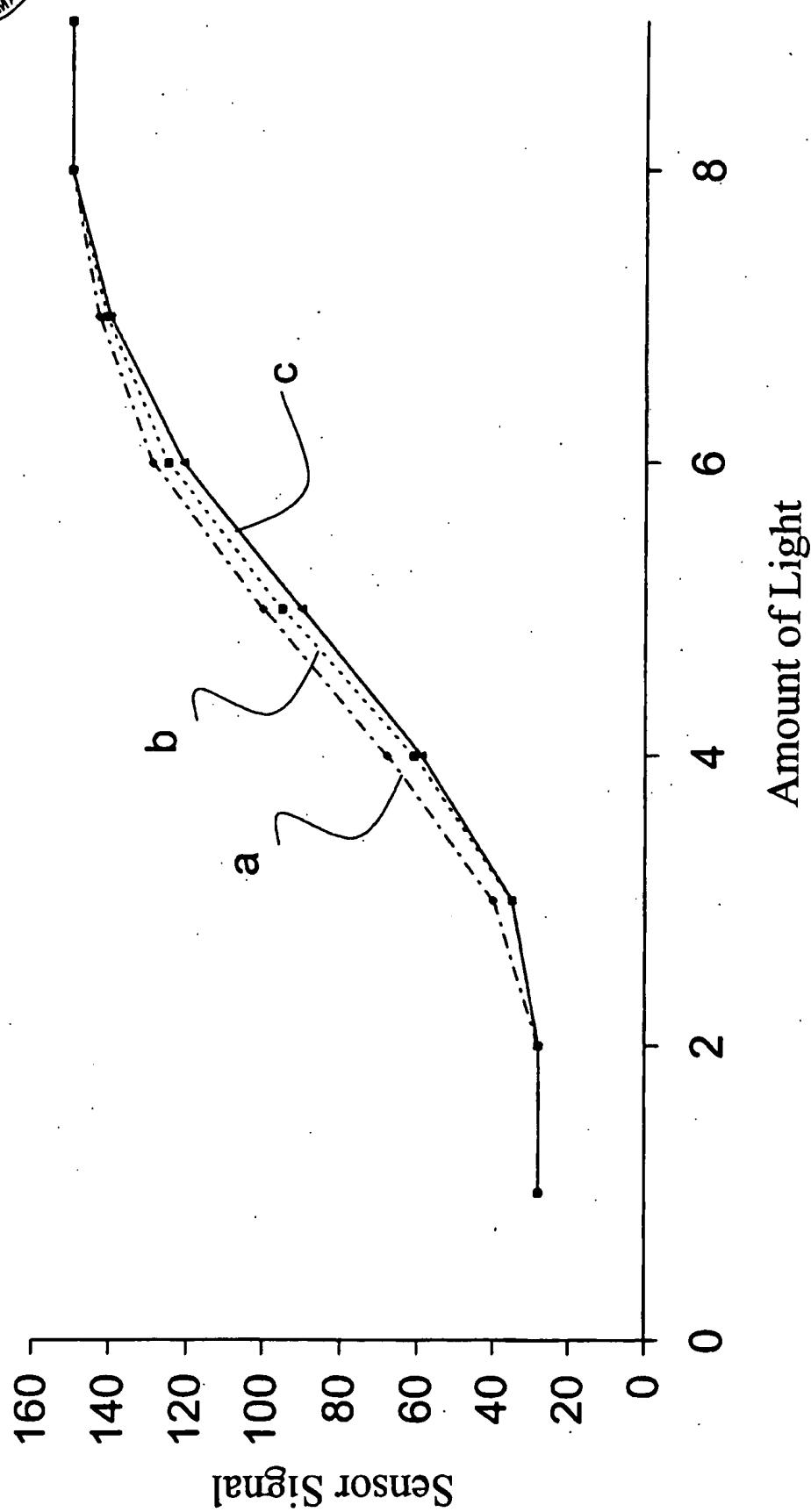


Fig. 2